

PCT/IT03/00453

(AMENDED) CLAIMS

1) Apparatus for producing small paper rolls characterized in that it comprises:

- a rewinding machine (R) for producing elongated paper rolls or logs (2);
- a trimming device (D) for trimming each log (2) produced by said rewinding machine (R);
- a store (M) wherein the logs (2) the logs (2') already trimmed are stored;
- at least a cutting-off machine (T) for subdividing the logs (2') already trimmed and supplied by said store (M) into a plurality of small rolls.

2) Apparatus for producing small paper rolls characterized in that it comprises:

- a rewinding machine (R) for producing elongated paper rolls or logs (2);
- a store (M) wherein said logs (2) are stored;
- a trimming device (D) for trimming each log (2) produced by said rewinding machine (R) and supplied by said store (M);
- at least a cutting-off machine (T) for subdividing the logs (2') already trimmed and supplied by trimming device (D).

3) Apparatus according to claim 1 characterized in that it comprises:

- a section for the entry of the logs (2) to be trimmed;
- a section for the exit of the trimmed logs (2');;
- a station with cutting means (6) for trimming the logs (2);
- means (3) for moving the logs (2, 2') between said entry section, said cutting station and said exit section;

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- means (4), associated with said log-moving means (3), for retaining the logs when subjected to said movement.
- 4) Apparatus according to claim 3 characterized in that the said log retaining means are gripper means.
- 5) Apparatus according to claims 3 and 4 characterized in that said gripper means are associated with said means (3) for moving the logs.
- 6) Apparatus according to claim 3 characterized in that it comprises means (5), disposed and acting between said section for the entry (1) and said means (3) for moving the logs, in order to transfer the logs (2) from the section (1) to the means (3) and in that said means (5) for transferring the logs (2) comprise a body (52), mounted on a shaft (51) parallel to the logs (2) which come in through the entry section thereof, and provided with a plurality of seats (50) for the logs to be transferred.
- 7) Method for producing a plurality of small rolls from paper rolls or logs characterized in that it comprises:
- a first step of producing a paper roll or log (2);
  - a second step of trimming said log (2) by removing a reduced portion thereof in correspondence of both its ends, thus obtaining a trimmed log (2');
  - a third step of storing said trimmed log (2') into a store (M);
  - a fourth step of subdividing said trimmed log (2') into a plurality of small rolls, said trimmed log (2') being supplied by said store (M).
- 8) Method for producing a plurality of small rolls from paper rolls or logs characterized in that it comprises:
- a first step of producing a paper roll or log (2);

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nted: 28-10-2004

DA: STUDIO MARTINI +39 05

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- a second step of storing said log (2) into a store (M);
- a third step of trimming said log (2) in a trimming station by removing a reduced portion thereof in correspondence of both its ends, thus obtaining a trimmed log (2');
- a fourth step of subdividing said trimmed log (2') into a plurality of small rolls, said subdividing step being carried out in a subdividing station separated by said trimming station.

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